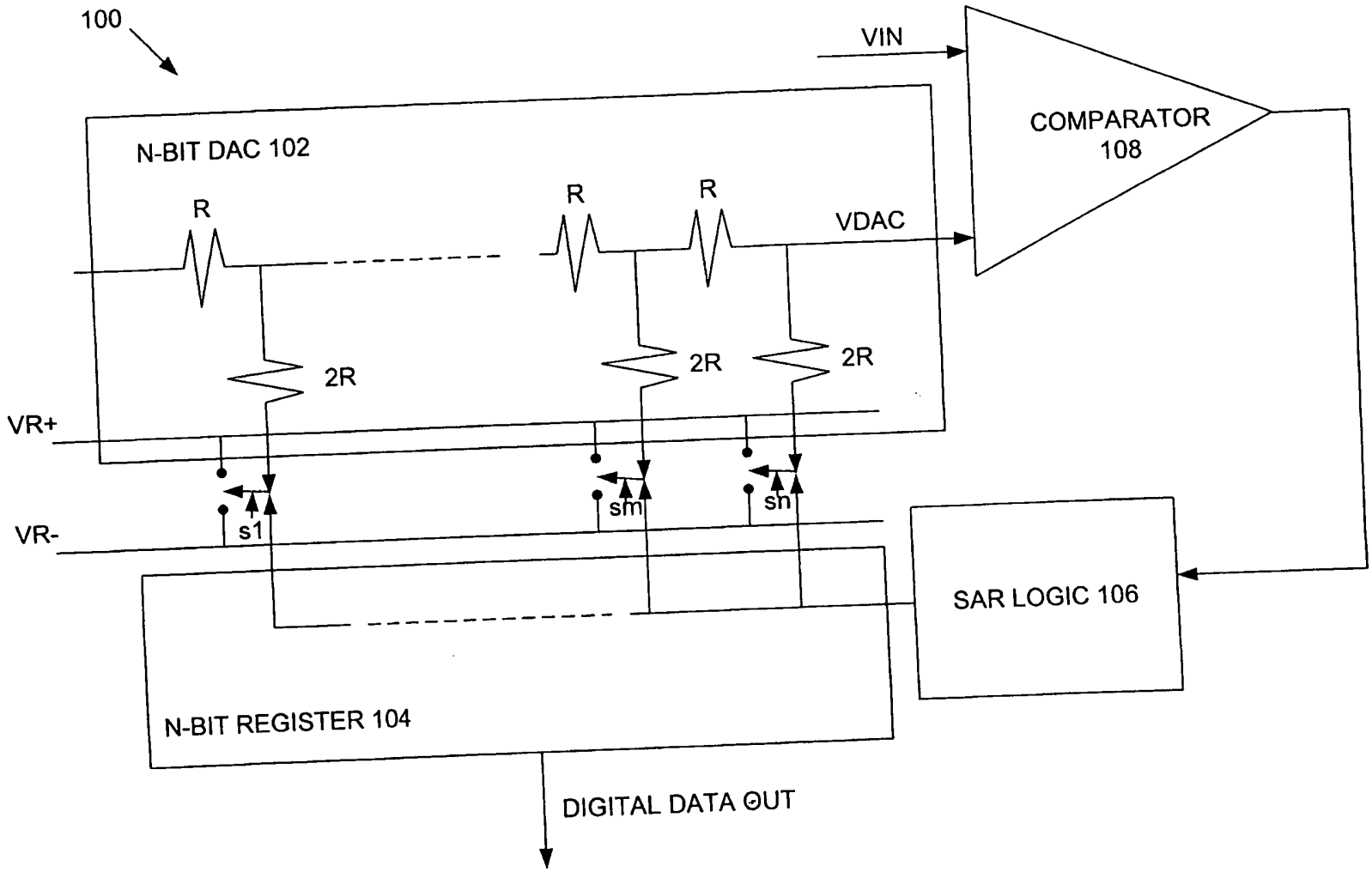

FIGURE 1 - PRIOR ART

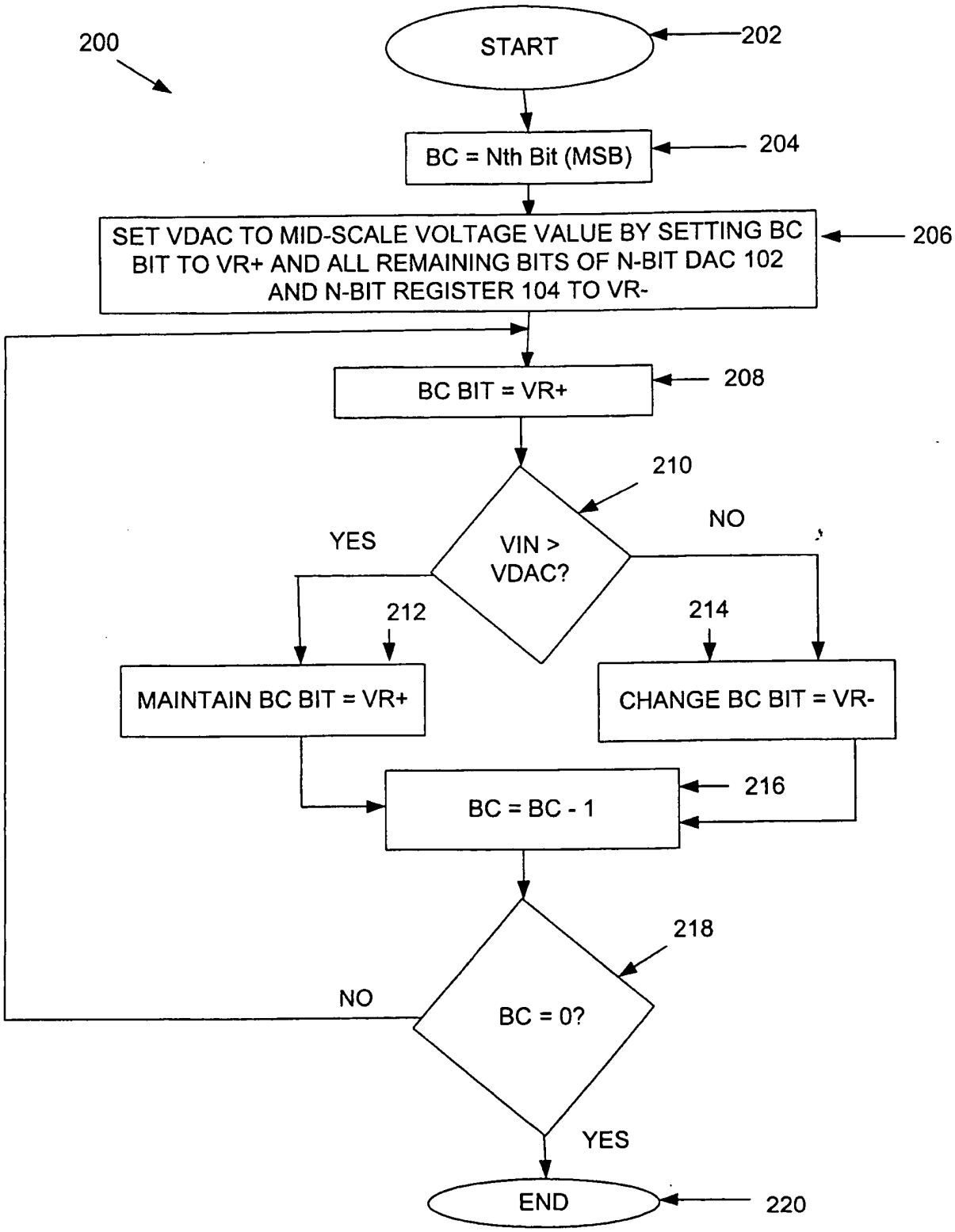

FIGURE 2- PRIOR ART

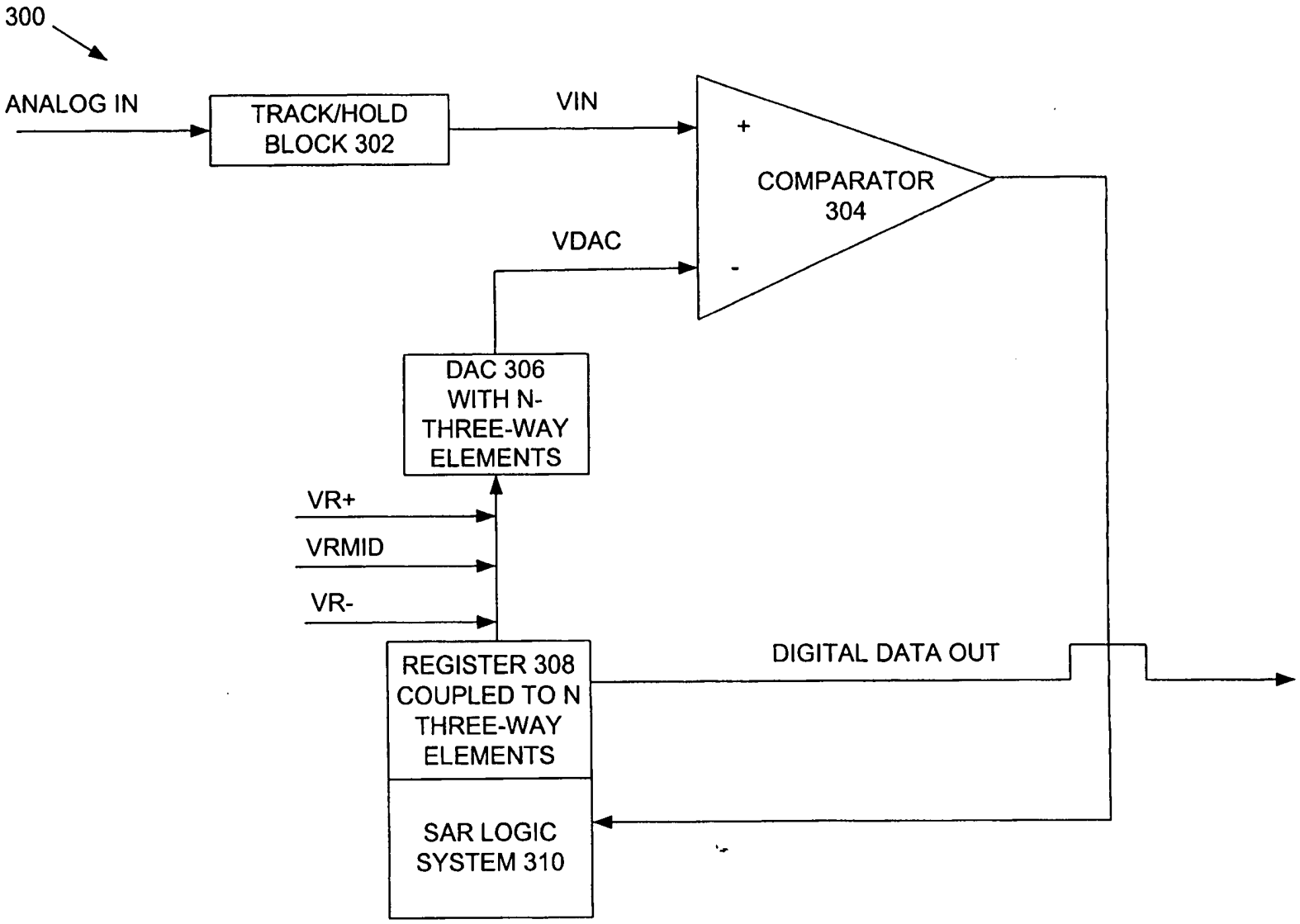
300
ANALOG IN
TRACK/HOLD BLOCK 302
VIN
+
COMPARATOR 304
-
VDAC
DAC 306 WITH N-THREE-WAY ELEMENTS
VR+
VRMID
VR-
REGISTER 308 COUPLED TO N THREE-WAY ELEMENTS
DIGITAL DATA OUT
SAR LOGIC SYSTEM 310

FIGURE 3

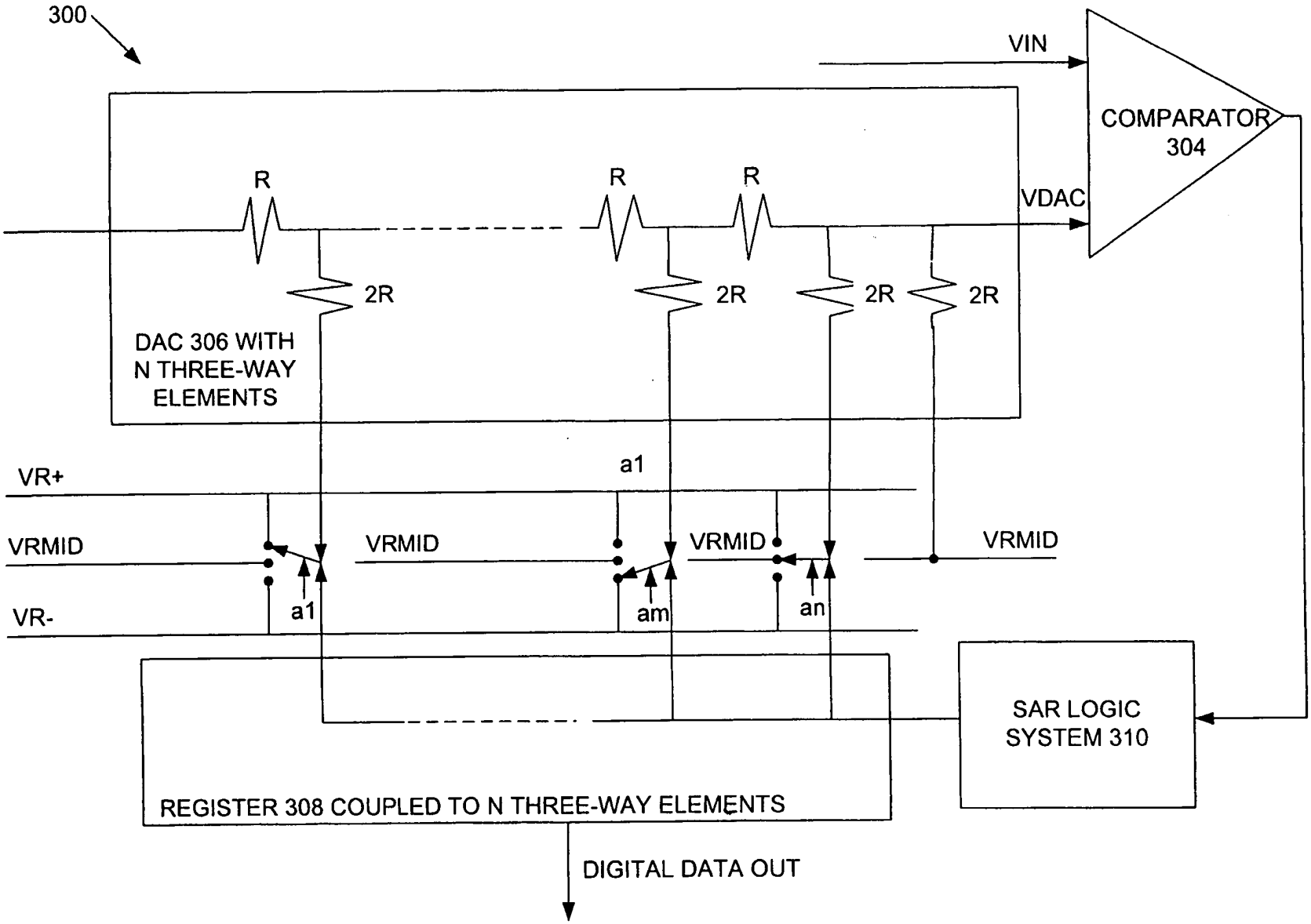
300
VIN
COMPARATOR 304
R
R
R
VDAC
2R
2R
2R
2R
DAC 306 WITH N THREE-WAY ELEMENTS
VR+
a1
VRMID
VRMID
VRMID
VRMID
VR-
a1
am
an
SAR LOGIC SYSTEM 310
REGISTER 308 COUPLED TO N THREE-WAY ELEMENTS
DIGITAL DATA OUT

FIGURE 4

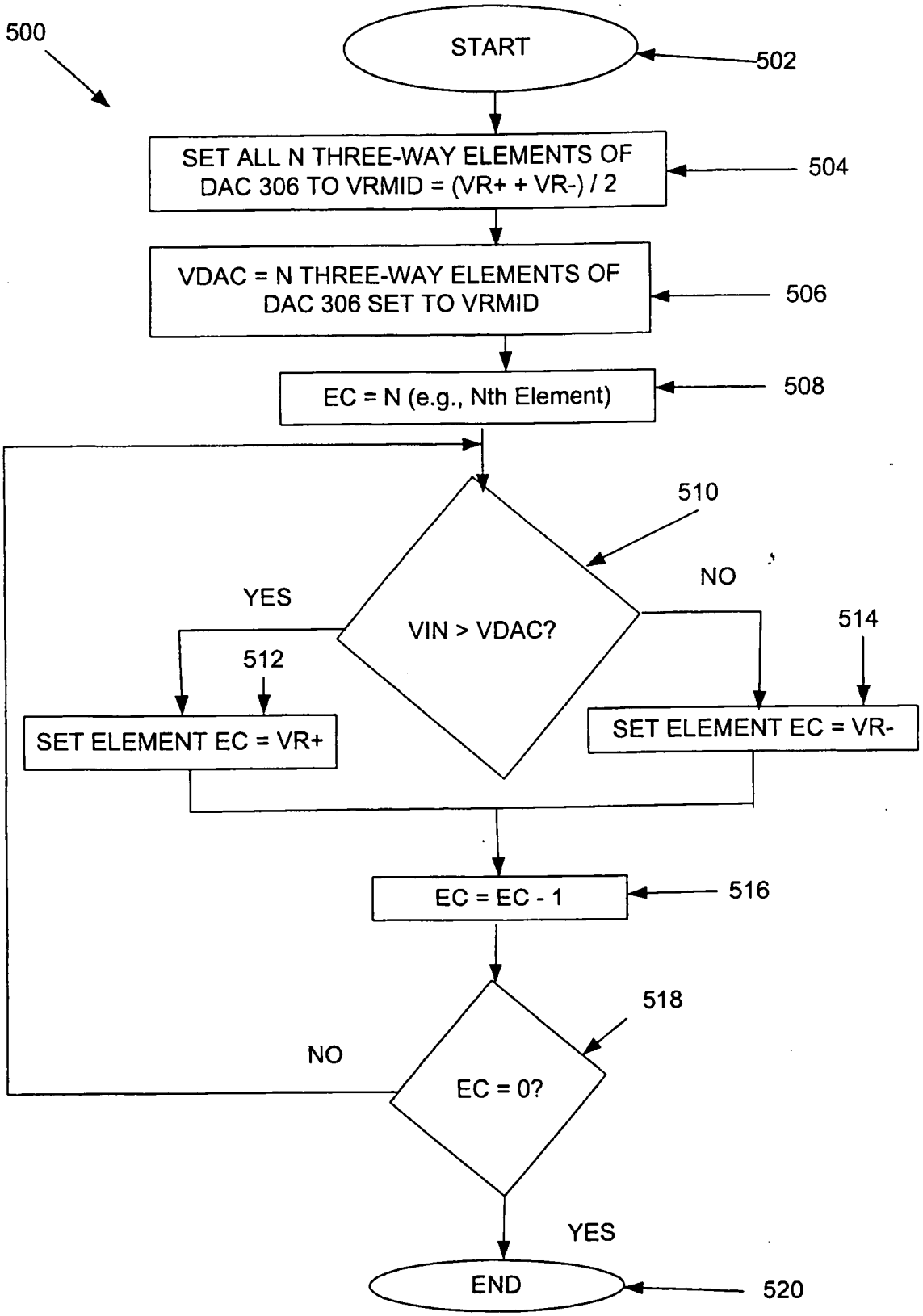
500
START
502
SET ALL N THREE-WAY ELEMENTS OF DAC 306 TO VRMID = (VR+ + VR-) / 2
504
VDAC = N THREE-WAY ELEMENTS OF DAC 306 SET TO VRMID
506
EC = N (e.g., Nth Element)
508
510
VIN > VDAC?
YES
NO
512
514
SET ELEMENT EC = VR+
SET ELEMENT EC = VR-
EC = EC - 1
516
518
EC = 0?
NO
YES
END
520

FIGURE 5